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UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

ZETES EXPEDITION
March - August 1966

LIST OF CORES AND DREDGE HAULS
Copied from Shipboard Logs

Depths Corrected by Matthews' Tables

R/V ARGO

- ZTS II 1Ga 21 March 1966, 1512-1715 hrs.; 40°14'N, 153°22'E; depth 5688 m; core length 55 cm. Green-gray clay at bottom, gray in center and brown mottled near top. Abyssal plain.
- ZTS III 1Gb 6 April 1966, 1500-1715 hrs.; 39°42'N, 144°07'E; depth 6702 m. Japanese 3 inch corer. Brown and green clay, in two plastic boxes. Bottom of Japan Trench.
- ZTS III 2G 9 April 1966, 0725-0910 hrs.; 37°55'N, 150°32'E; depth 5773 m; core length 71 cm. 18 cm of brown mud, remainder gray. Small hill on abyssal plain.
- ZTS III 3G 11 April 1966, 2021-2115 hrs.; 33°19'N, 158°02'E; depth 3032 m; core length 50 cm. Oriented core. Upper half brown calcareous ooze, lower half grayish clay. Top of Northwestern Pacific Rise.
- ZTS III 4G 19 April 1966, 2015 hrs.; 39°30'N, 170°51'E; depth 6232 m; core length 78 cm. Top brown clay, middle brown-green clay, bottom light green clay.
- ZTS III 5G 25 April 1966, 1133 hrs.; 45°16'N, 158°10'E; depth 4714 m; core length 159 cm. Oriented core. Red clay and gray mud. Abyssal hills.
- ZTS III 6G 26 April 1966, 1615-1730 hrs.; 45°39'N, 154°29'E; depth 4941 m; core length 30 cm. Oriented core. Upper 10 cm brown mud, lower 20 cm gray silty clay. Marginal swell.
- ZTS III 7G 28 April 1966, 1358-1505 hrs.; 44°19'N, 149°13'E; depth 4775 m; core length 56 cm. Oriented core. 0-8 cm, brown mud; 8-50 cm, blue mud; 50-56 cm, gray silty clay.
- ZTS III 8G 30 April 1966, 1200-1340 hrs.; 41°56'N, 148°44'E; depth 5436 m; core length 103 cm. Oriented core. Red clay in upper few cm, green sandy mud below. East of Japan Trench.
- ZTS III 9G 8 May 1966, 0615-0744 hrs.; 40°33'N, 148°02'E; depth 5336 m; core length 113 cm. Oriented core. Gray mud.
- ZTS IV 10G 15-16 May 1966, 2310-0100 hrs.; 26°52'N, 148°47'E; depth 1231 m. Several small pieces only of Mn-coated limestone, in plastic box. Top of Seamount No. 3.
- ZTS IV 11G 17 May 1966, 1203-1348 hrs.; 27°42'N, 146°46'E; depth 5696 m; core length 133 cm. Oriented core. Brown clay.
- ZTS IV 12G 22 May 1966, approximately 0600 hrs.; 28°23'N, 136°17'E; depth 4518 m; core length 102 cm. Oriented core. Brown clay with small Mn nodule at top.
- ZTS V 13G 17 June 1966, 1050-1220 hrs.; 29°37'N, 174°07'W; depth 5156 m. Catcher and cutter sample only. 1/4-inch Mn crust on top of particles of sand, gravel and Mn, with red clay below. Abyssal plain N.E. of Midway.

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ZTS V 14G 19 June 1966, 1725-1855 hrs.; 25°14'N, 164°07'W; depth 4937 m; core length 113 cm. Red clay.

NOTE: ZETES VI, cores 15-28, are SHOW Expedition samples and are catalogued separately as SHOW-A (R/V ARGO) with the SHOW-H (R/V HORIZON) samples.

ZTS VIb 29G 13 July 1966, 1950-2145 hrs.; 20°00'N, 154°17'W; depth 5487 m; core length 3 cm. Red clay with volcanic ash. Abyssal plain, Hawaiian Arch.

ZTS VIb 30G 14 July 1966, 1330-1520 hrs.; 18°25'N, 154°03'W; depth 5195 m; core length 64 cm. Oriented core. Red clay with volcanic ash. Abyssal plain.

ZTS VIb 31G 15 July 1966, 1130-1315 hrs.; 17°34'N, 153°13'W; depth 4908 m; core length 68 cm. Oriented core. Red clay and volcanic ash. Hawaiian Arch.

ZTS VIb 32G 16 July 1966, 1910-2055 hrs.; 19°16'N, 152°46'W; depth 5083 m; core length 147 cm plus? 10 cm lost from top. Oriented core. Preservation very poor, core stored horizontally. Red clay. Hawaiian Arch.

ZTS VII 33G 23 July 1966, 2200 hrs.; 20°47'N, 152°01'W; depth 5118 m; core length 155 cm. Oriented core. Red clay.

X ~~ZTS VII 34G~~ 26 July 1966, 0210-0348 hrs.; approximately 21°05'N, 152°40'W; depth 4880 m. No core; cutter came off. Abyssal hills.

// ~~ZTS VII 35G~~ 26 July 1966, 1050 hrs.; 21°43'N, 153°14'W; depth 5027 m; core length 146 cm. Oriented core.

X ~~ZTS VII 36G~~ 26 July 1966, 2335 hrs.; approximately 22°40'N, 152°00'W; depth 5264 m. No core.

// ~~ZTS VII 37G~~ 27 July 1966, 1720-1905 hrs.; 24°02'N, 150°49'W; depth 5372 m; core length 151 cm. Oriented core. Abyssal hills.

ZTS VII 38G 29 July 1966, 0435-0615 hrs.; 26°42'N, 147°29'W; depth 5365 m; core length 133 cm. Oriented core. Brown clay with a small Mn nodule at the top. Abyssal hills.

X ~~ZTS VII 39G~~ 29 July 1966, 2245-0015 hrs.; 28°40'N, 144°55'W; depth 5048 m; core length 142 cm. Oriented core. Abyssal hills.

// ~~ZTS VII 40G~~ 30 July 1966, 2106-2235 hrs.; 30°12'N, 143°17'W; depth 5050 m; core length 150 cm. Oriented core. Abyssal hills.

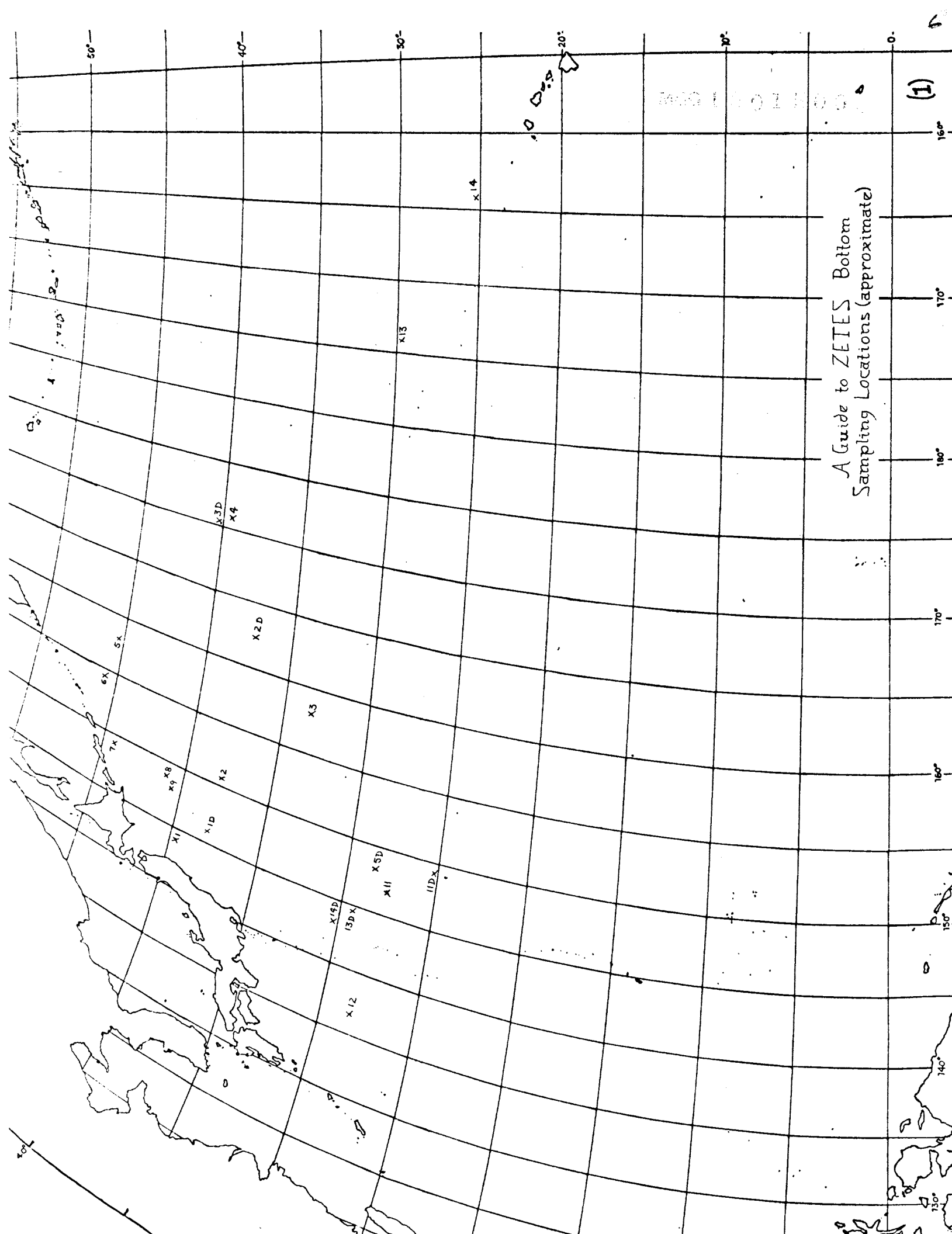
ZTS VII 41G 3 August 1966, 1115-1237 hrs.; 31°01'N, 137°41'W; depth 4613 m; core length 138 cm. Oriented core. Brown mud; preservation good but core dropped during packaging. Abyssal hills.

- ZTS VII 42G 4 August 1966, 0010-0139 hrs.; 31°10'N, 135°57'W; depth 4672 m; core length 113 cm. Oriented core. Abyssal hills.
- ZTS VII 43G 4 August 1966, 0850-1014 hrs.; 31°06'N, 134°58'W; depth 4569 m; core length 136 cm. Oriented core.
- ZTS VII 44G 4 August 1966, 2240-0010 hrs.; 31°18'N, 133°00'W; depth 4549 m; core length 134 cm. Oriented core.
- ZTS VII 45G 5 August 1966, 0620-0740 hrs.; 31°24'N, 132°00'W; depth 4632 m. No core. Abyssal hills.
- ZTS VII 46G 5 August 1966, 1420-1550 hrs.; 31°23'N, 131°03'W; depth 4526 m; core length 112 cm. Oriented core. Abyssal hills.

DREDGE HAULS

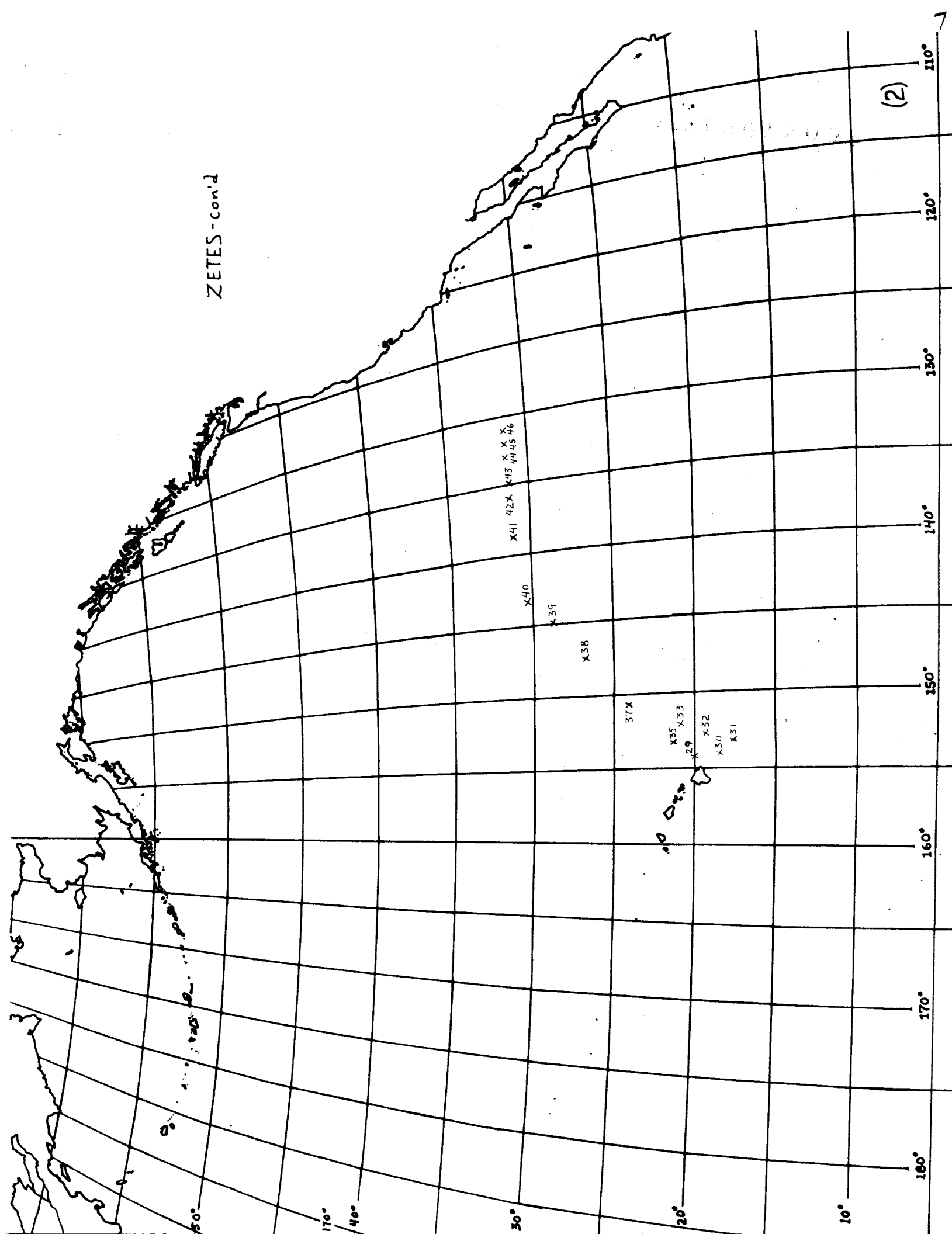
- ZTS III 1D 7 April 1966, 1055-1930 hrs.; 38°01'N, 145°59'E; depth 3653-2785 m. One boulder of coarse-grained and one of fine-grained volcanic rock, and several vesicular volcanic rocks. Northwest slope of Ryofu Seamount.
- ZTS III 2D 13 April 1966, 1530-1755 hrs.; approximately 37°16'N, approximately 162°24'E; depth 1295-1110 m. Fine-grained basic volcanic rock, some vesicular volcanic rocks, Mn-encrusted boulder, Mn nodules, yellow clayey slabs, and one red brittle star (in jar).
- ZTS III 3D 21 April 1966, 2115-2400 hrs.; 40°16'N, 170°20'E-170°19'E; depth 2037-1664 m. Twelve boulders up to 2 ft. long, all Mn-coated volcanic rock fragments, apparently quite altered, some vesicular.
- ~~ZTS III 4D~~ 14 May 1966, 0120 hrs.; 28°22'N, 148°15'E; depth 2516-2233 m. No sample: dredge lost. Empress Seamount.
- ZTS IV 5D 14 May 1966, 0536-0920 hrs.; 28°23'N, 148°15'E; depth 2423 m. Several boulders, altered to Mn and Fe oxides, some tabular or slightly curved; two subrounded nodules with concentric structure; orange to tan clay in boulder joints; several small pieces of black, highly vesicular and tabular pumice with foraminifera in vesicles as well as on Mn boulders. Top of seamount.
- ~~ZTS IV 6D~~ 15 May 1966, 1715 hrs.; 27°03'N, 148°38'E; depth 1231 m. No sample: dredge lost. Top of seamount.
- ZTS IV 7D 16 May 1966, 0130-0350 hrs.; 26°51'N, 148°47'E; depth 2234-2046 m. Full pipe dredge: about half is fine-grained, dark gray basalt, the other half a breccia of fine-grained, soft, yellow fragments. Side of seamount.
- ZTS IV 8D 17 May 1966, 0035 hrs.; 27°56'N, 147°39'E; depth 2728-2083 m. Pipe dredge: One Mn nodule, remainder highly vesicular, altered volcanic rock with some vesicles filled either with a white material or with green alteration products; some rocks have brown groundmass with green altered phenocrysts, others have green groundmass. Top of Seamount No. 4.

- ~~ZTS IV 9D~~ 24 May 1966, 0341 hrs.; 30°13'N, 136°45'E; depth 1397 m. No sample; pipe dredge lost.
- ~~ZTS VII 1D~~ 26 July 1966, 1240-1540 hrs.; 21°45'N, 153°05'E; depth 5032 m. No sample.
- ZTS VII 2D 28 July 1966, 0636-1040 hrs.; 25°11'N, 149°21'E; depth 5451 m. Full pipe dredge: Red clay. Abyssal hills. Taken for Dr. H. Kolm, M.I.T.
- XZTS VII 3D 28 July 1966, 1055 hrs.; 25°10'N, 149°29'E; depth 5467 m. No sample: wire wrapped around pipe dredge. Abyssal hills.
- ZTS VII 4D 30 July 1966, 0646-1120 hrs.; 29°14'N, 144°30'E; depth 4975 m. Pipe dredge three-fourths full. Red clay. Abyssal hills. Taken for Dr. H. Kolm, M.I.T.
- ZTS VII 5D 30-31 July 1966, 2243-0320 hrs.; 30°12'N, 143°17'W; depth 5080 m. Full pipe dredge. Red clay. Abyssal hills. Taken for Dr. H. Kolm, M.I.T.



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Key to Abbreviations Used in Sample Descriptions ("core logs")

G: Gravity core

P: Piston core

PG: Gravity core obtained in conjunction with a piston core, and bearing the same sample number. This is also known as a "trip gravity" core since in this instance a gravity corer is used to trip the arm of the piston corer.

Note: In some core logs (e.g. Monsoon) it will be noted that there is sometimes a PG core with no accompanying P core (or vice versa). This is a result of no P sample having been obtained; therefore, even the attempt was ignored when the log was compiled. (Obviously, however, there was an attempt or there would be no PG.)

V: Heat probe core, short and of small diameter (c. 1"), developed by R. von Herzen. Occasionally regular gravity cores are used instead.

GV: AMPHITRITE Expedition ONLY: Gravity cores taken for a specific person and purpose.

Note: Such "special request" cores are frequently taken on SIO cruises; but, with the above exception, are not usually designated differently than other samples. Frequently, also, such cores are used in their entirety by the person for whom they were taken and are no longer in the SIO collection, even though they may appear in the log.

C: Very small cores obtained by corers attached to the frame of a camera.

T: Triple corer samples, some are very small, others are regular gravity cores.

Grab: Designated as such (e.g., MSN 135 grab).

S: Snapper: The proper term for "grab". May also be spelled out.

D: Dredge samples. Also used to designate subaerial samples.

H: Hydrographic PBS (Phleger Bottom Sampler). See Downwind, Horizon, DWHHI.

Abbreviations of ship names:

A: R/V Argo (e.g., LSDA)

H: R/V Horizon (e.g., LSDH, DWH)

B: R/V Spencer F. Baird (e.g., DWB)

HMS: R/V Hugh M. Smith (e.g., FAN, HMS)

S: R/V Stranger

Note: In the LUSIAD-ARGO (LSDA) core log will also be found SCS: South China Sea.

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Use of lower case letters and prime ('): Used to indicate that two (or more) attempts were made to obtain a sample; e.g., 101 G (first attempt), 101 Ga (second attempt); or 101 Ga (first attempt), 101 Gb (second attempt). Occasionally, as in Chubasco Roman-numeraled samples, a prime mark (') has been used for this purpose, e.g., CHUB Vg, V'g. (Note that this log also uses lower case for gravity and piston core designations).

Occasionally no letter designation is used if all cores of an expedition were gravity cores.